

AMENDMENTS TO THE CLAIMS

1-5. (Canceled)

6. (Currently amended) ~~Apparatus~~ The apparatus according to claim 11, including an opaque shoe for pressing in light-proof manner around the window of the vessel provided with ~~the a-central~~ filling opening for passing light between the vessel and ~~the~~ photometric means.

7. (Currently amended) ~~Apparatus~~ The apparatus according to claim 11, including a plate for receiving the washing means and the photometric means.

8. (Currently amended) ~~Apparatus~~ The apparatus according to claim 11, wherein the photometric means include moving equipment for pressing the shoe against the window of the vessel.

9. (Currently amended) ~~Apparatus~~ The apparatus according to claim 11, including a shutter for optically isolating a photoelectric detector and means for measuring electrical values delivered by the photoelectric detector while it is immersed in the dark, the shutter being closed.

10. (Currently amended) ~~Apparatus~~ The apparatus according to claim 9, wherein movement of moving equipment serves to close or open the shutter.

11. (Currently amended) ~~Automatic~~ An automatic apparatus for immunological assay, the apparatus comprising:

means for supporting, guiding, and stepwise displacement of vessels, or of sets of reaction vessels along a path having a predetermined number of positions,

means for supporting samples to be analyzed,

means for supporting reagents, and

means for taking determined quantities of samples and of reagents and for injecting the quantities taken into the reaction vessels, ~~together with~~

means for washing the vessels,

means for reading results, and

means for feeding the sets of reaction vessels and for ejecting the sets of ~~used~~ vessels, ~~the apparatus including~~

means for forming a temporary dark chamber with the vessel, the temporary dark chamber being ~~that is~~ proof against external light, ~~said dark chamber having~~

photometric means for measuring an intensity of light ~~and a vessel~~, wherein the vessel includes including

walls ~~in a form of a vessel~~ for receiving a sample to be tested, a test reagent, and a substrate coupled with a chemiluminescent substance, and ~~also~~

a filling opening, wherein the walls are proof against any light emitted by the chemiluminescent substance, apart from a window for reading the intensity of any light emitted by a reaction mixture formed by the sample to be tested, the reagent, and the substrate, and wherein the window corresponds to the filling opening of the vessel and wherein the window is surrounded by a substantially plane zone against which a light-proof shoe is pressed, and

a light source for illuminating, on command, outside of a the dark chamber, ~~formed temporarily by the walls of the vessel~~ and

a photometric means so as to enable the dark chamber to be tested for light-tightness, the immunological assay being rejected if the photometric means detects light emitted by the light source.

12-14. (Canceled)

15. (Currently amended) ~~Apparatus~~ The apparatus according to claim 9, wherein the photoelectric detector is a photomultiplier.

16. (Currently amended) A reaction vessel assembly for an automatic chemiluminescence measuring apparatus for immunological assay which includes a photometric device, the assembly comprising:

a vessel comprising walls for receiving a sample to be tested, a test reagent, and a substrate coupled with a chemiluminescent substance, and ~~also~~ a filling opening, wherein the walls are proof against any light emitted by the chemiluminescent substance, and the filling opening corresponds to a window for reading an intensity of any light emitted by a reaction mixture formed by the sample to be tested, the reagent, and the substrate, and wherein the filling opening is completely surrounded by a planar rim; and

a light-proof shoe that is proof against external light and that is ~~selectively~~ directly pressed against the planar rim to form a temporary dark chamber, the shoe being provided with a central opening for passing light between the vessel and a the photometric device.

17. (Currently amended) An automated chemiluminescent apparatus for immunological assay, the apparatus comprising:

means for supporting, guiding, and stepwise displacement of vessels, or of sets of reaction vessels along a path having a predetermined number of positions,

means for supporting samples to be analyzed,

means for supporting reagents, and

means for taking determined quantities of samples and of reagents and for injecting the quantities taken into the reaction vessels, ~~together with~~

means for washing the vessels,

means for reading a result, and

means for feeding the sets of reaction vessels and for ejecting the sets of ~~used~~ vessels, ~~the apparatus including~~

means for forming a temporary dark chamber with the vessel, the temporary dark chamber being ~~that is~~ proof against external light, ~~said the~~ dark chamber having photometric means for measuring an intensity of light ~~and a vessel, wherein the vessel includes including~~

walls ~~in a form of a vessel~~ for receiving a sample to be tested, a test reagent, and a substrate coupled with a chemiluminescent substance, and ~~also~~

a filling opening, wherein the walls are proof against any light emitted by the chemiluminescent substance, and the filling opening corresponds to a window for reading the intensity of any light emitted by a reaction mixture formed by the sample to be tested, the reagent, and the substrate, wherein the filling opening is completely surrounded by a planar rim, and ~~including~~

a light proof shoe provided with a central opening for passing light between the vessel and the photometric means and being ~~selectively~~ directly pressed against the planar rim.

18. (Canceled)

19. (Previously Added) The apparatus according to claim 17, including a plate for receiving the washing means and the photometric means.

20. (Previously Amended) The apparatus according to claim 17, wherein the photometric means include moving equipment for pressing the shoe against the window of the vessel.

21. (Previously Added) The apparatus according to claim 17, including a shutter for optically isolating a photoelectric detector and means for measuring electrical values delivered by the photoelectric detector while it is immersed in the dark, the shutter being closed.

22. (Canceled)

23. (Currently Amended) A method for performing immunological assays that detects light emitted by a reaction mixture consisting of a sample, a reagent and a chemiluminescent substance, said method being performed with an automated chemiluminescent apparatus as set forth in claim 17, said method comprising:

- combining a sample and a reagent in a chamber of the reaction vessel having a filling opening;

- adding a chemiluminescent substance to the chamber;

- pressing a detector directly against the filling opening;

- measuring the light emitted from the chamber when the detector is pressed against the filling opening to provide a first reading;

- illuminating a light source external to the chamber;

- measuring the light emitted from the chamber with the light source illuminated to provide a second reading; and

- comparing the first reading and the second reading to determine the light-tightness of the chamber.